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PROGRESS REPORT ON FOUR NEW REGIONAL LABORATORIES

U.S. Department of Agriculture

Broadcast by O. E. May, D. F. J. Lynch, P. A. Wells, and T. L. Swenson, Directors of Regional Laboratories, and Wallace Kadderly, Chief of the Radio Service, in the Department of Agriculture portion of the National Farm and Home Hour Friday, January 17, 1941, by the National Broadcasting Company and associated Blue Network Stations.

--ooOoo--

KADDERLY:

Today we're going to have a rather brief progress report on a job that started a little more than two years ago when Congress passed a bill (and it was signed by the President) authorizing the establishment of four new laboratories to search for new industrial uses for farm products.

The four directors of these regional laboratories are here to tell you how their work is coming along. As I give you their names---they'll identify the location of the laboratories which they direct. First, D. F. J. Lynch.

LYNCH:

I'm director of the Southern Laboratory in New Orleans.

KADDERLY:

P. A. Wells.

WELLS:

The Eastern Laboratory in Philadelphia.

KADDERLY:

T. L. Swenson.

SWENSON:

I'm head of the Western Laboratory--- at Albany, California.

KADDERLY:

And the fourth and last---O. E. May.

MAY:

Peoria, Illinois--the Northern Laboratory.

KADDERLY:

Of course one of the first things that had to be done was to select sites--- and to get buildings put up. I understand the buildings to house these new laboratories are now all completed and in use, except yours, Mr. Lynch.

LYNCH:

Yes, our laboratory in New Orleans is the only one not occupied. We hope to be in our new building by the end of next month.

KADDERLY:

Then you haven't any research work under way as yet in the Southern Laboratory.

(over)



LYNCH: Yes--we do. Of course, not much as yet---but one thing we're trying---is the making of special cotton overcoats for sheep.

KADDERLY:

Cotton overcoats for sheep!

LYNCH:

We don't think it's as peculiar as you seem to, Mr. Kadderly. We're cooperating with the agricultural experiment station of the University of Wyoming. Sheep men in that State put some of these cotton coverings on sheep last year---and found that the wool grew better---and it was much cleaner at shearing time. This year---we sent them 500 coats. They're being put on the sheep just about now---to be left on until warm weather. If coats were put on all our sheep it would result in a market for 100 thousand bales of cotton a year.

KADDERLY:

And of course finding new uses for cotton is one of the major lines of work your southern laboratory is interested in.

LYNCH:

That's right. We're going to work on the better utilization of all cotton products---cotton lint, linters, cottonseed oil and cottonseed meal. We feel that cotton cloth can be made to hold a crease better, and not wrinkle so easily. That's one of the problems we'll tackle when we get our full staff of scientists at work. And then we'll also be working on new uses for peanuts---and peanut oil. One possible use of peanut oil would be to replace olive oil in cotton spinning. And we'll continue to work on uses for sweetpotatoes---both the sweetpotato starch which enters many industrial fields and sweetpotato flour which has promise as a first grade carbohydrate feed for livestock.

KADDERLY:

Well, that gives us a very quick view of the general line of work that is to be followed in the laboratory at New Orleans. Now---Dr. Swenson. How about things in the Western laboratory in California.

SWENSON:

We moved into our new building at Albany on November 7---and have about one-third of what we hope will be our complete staff at work. We're to study alfalfa, apples and other fruits, potatoes, poultry and poultry products, vegetables---and wheat.

KADDERLY:

Looking for new industrial uses or developing new methods for processing all those farm products.

SWENSON:

That's right.

The frozen pack laboratory at Seattle, Washington, has been placed under our supervision---and of course there's been work with frozen foods carried on there for years. One thing we did recently was prepare an entire dinner off frozen



SWENSON: (Cont.)

foods---including frozen chicken stuffed with frozen dressing. We shipped one sample of it here to Washington. Did you happen to get in on the dinner?

KADDERLY:

No---I'm sorry to say, I didn't. But it sounds good. That idea of putting the dressing right in the bird before its frozen is a new idea, isn't it?

SWENSON:

Yes, it is, so far as I know. The thing we have in mind is the possibility of a commercial product---frozen dinners including stuffed chicken all ready for the roasting oven.

By the way---one thing we've developed recently is a way of preventing "freezer burn." Sometimes, if the birds are improperly handled, before they're frozen there'll be spots on the skin that look as though they had been scorched. We've found a way to prevent that.

KADDERLY:

Better looking frozen poultry is the result.

SWENSON:

There's another problem that we've worked on with some of the food processing plants in the West; that is, disposing of waste products, such as peelings, cores, pomace, and so on. We think that among other uses there are possibilities of using this waste material in compost, to improve the soil. If this can be developed, then the stuff won't have to be dumped into streams, to pollute the water and kill the fish.

One recent development at the frozen pack laboratory is a method of freezing some of the soft fruits so they hold their shape after they're frozen. We think this will be important to the fruit growers and to the frozen foods industry.

Besides that---we're starting some work on apples---and we'll take up other problems dealing with wheat---some of the citrus fruits---alfalfa---and other farm crops which are important in the western States.

KADDERLY:

Thanks, Dr. Swenson. Now--for a report on the eastern laboratory--at Philadelphia. Dr. Wells---what's doing in your laboratory?

WELLS:

We got into our new building last August---and 25 of our 72 laboratories are already set up and in operation. One of the things we're working on is apples---better ways of making apple juice for the market. Naturally, we're cooperating with the State experiment stations and with apple juice processors. I think we've made some progress already that will mean a market for more apples---and a good beverage for consumers.

Then, we're working on tobacco---trying to develop new nicotine compounds. We have one that may possibly be used for both insect control and to prevent certain diseases of plants. This work is all in a very preliminary stage, however.



WELLS: (Cont.)

We'll be studying milk---trying to develop better ways of making casein products from milk. Most milk casein now goes into paper sizing. There are many other uses that could be developed---and we think too that casein quality could be improved.

We plan to study lard---to see if it can be made more stable---and of better quality. It's possible that some of the fatty acids in lard may have commercial uses that will be important. Already it is known in industry that they can be made into certain amines that have a value as insecticides---and others that are useful as water softeners---and still others are valuable in making plastics. Those are some of the lines we'll follow in the Eastern Laboratory.

KADDERLY:

And they sound interesting and full of possibilities, Dr. Wells. Now---Dr. May---what about the research work in the Northern Laboratory at Peoria, Illinois?

MAY:

At Peoria we're to work on corn, wheat---and agricultural residues---such as straw, corn-stalks, corn cobs---and the like. We moved into our new building about a month ago---and so we're in the stage of just rolling up our sleeves and getting ready to go to work.

One thing we've done was make a study of the tonnages of some agricultural residues available for industrial use---how much straw---how many thousand tons of corn cobs and so on -- would be available for industrial use in an average year. Nobody had gathered this information before---and it's important that we know this in carrying on studies of how these materials can be used.

KADDERLY:

And in the laboratory---what sort of things do you plan to study?

MAY:

Well---from some of the waste materials---corn cobs and wheat straw, for example, we already know lignin furfural and cellulose can be made. There are real possibilities for synthetic rubber production from materials obtainable from straw, stalks, cobs, and the like. There are other uses for these residues that we intend to study.

So far as wheat and corn are concerned---we'll concentrate especially on studies of starch and products which can be made from it. There are many things about starch that we need to know before we can use it to form new products.

KADDERLY:

What about motor fuel from farm products. I recall that's one of the problems you're going to work on at the laboratory in Peoria.

MAY:

Yes---that's one of the big jobs we're going to tackle. One of the important aspects of this problem is making alcohol or other fermentation products from corn or wheat, and using the alcohol as a motor fuel---perhaps alcohol alone, or



MAY: (Cont.)

perhaps blended with gasoline. We're setting up a pilot plant---that is, a regular alcohol-making plant on a small scale---so we can study methods of making alcohol and try to improve them and cut down the cost.

Alcohol is used to a great extent as a motor fuel in some of the European countries, where gasoline is more costly than it is here. There's no question that if gasoline were blended with alcohol--90 percent gasoline and 10 percent alcohol---it would provide an outlet for a vast amount of grain. The difficulty is that corn would have to be bought for about 25 cents a bushel or less, before alcohol could be made at a price to compete with gasoline. So we'll be looking for ways to produce alcohol at a lower cost.

KADDERLY:

Thanks very much, Dr. May.

Farm and Home friends---we've had a glimpse of the lines of work on which Department of Agriculture scientists are embarking at the new regional research laboratories, established in Philadelphia, New Orleans, Peoria, and Albany (California) to find new industrial uses for farm products.

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